

Work Order ID 52328 -1

Tuesday, September 22, 2009 3:12:10 PM

Page 1

Item ID: D2573

Accept

Revision ID: E

Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009 Start Qty: 8.00

Required Date: 10/9/2009 Req'd Qty: 8.00

Reference:

Approvals: Process Plan:

Date: 09-24 Tooling:

QC:

Date: SPC (Y/N):

Cust Item ID:

Customer:

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2573

Rev E

100



HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

0.00

0.00

Memo

Program Batch No. 52328 Double check by: HA ☐ 1-Machine Step
No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine
Step No 2 per Folio FA051 and inspect per attached Dimension Sheets ☐ 3-
Machine Step No 3 per Folio FA051 and insp

110



Mill Conv

Conventional Milling Machine

CONVENTIONAL MILLING MACHINE

0.00

0.00

Memo

Machine keyway as per dwg D2573 & D2574

120



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

0.00

Memo

Spur



Set Up/
Run Hours

0.00 8 09/10/09

0.00 8 09/10/09

0.00 09/10/09

P15



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2573 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>52328</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
5/10/13	100	Found by op opposite shift that there are dims on P&Z sheet that are not correct. - Also saddle to slide like	CP 05.10.13 per QSI042	0.113" THICK WALL OK → MIN THICK 0.110" SCRAP, SEE BELOW BORE OF 1.530 OK BORE OF 2.021 OK	SP 09/10/19	S 02/10/13	CP 05.10.13 per QSI042	S 09/10/13
		There is too thin about 0.100 should be 0.125 Re. operator error + the Sig Problem.	CP 05.10.13	SCRAP Qty(2) with WALL < 0.110". High STRESS AREA replace Batch# B46412 x2	SP 09/10/19	S 02/10/13	CP 05.10.13	S 05/10/13
05.10.29	100	REMEASURING SADDLE WITH 0.115", ACTUAL MIN IS 0.110".	CP 05.10.29 per QSI042	SCRAP SADDLE ✓			CP 05.10.29 per QSI042	

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2573 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>52328</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09/10/09	100	One saddle was affected by mark on the Island and on the bore. R.C. Machine not function Machine drop tool during transfer operation.	<i>[Signature]</i>	Scrap Replace Batch # <u>46412</u>	<i>[Signature]</i> 09/10/09	<i>[Signature]</i> 07/10/13	<i>[Signature]</i>	<i>[Signature]</i> 07/10/13

NOTE: Date & initial all entries

Work Order ID 52328

Tuesday, September 22, 2009 3:12:10 PM



Page 2

Item ID: D2573

Accept



Setup Start



Revision ID: E

Stop



Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009 Start Qty: 8.00



Cust Item ID:

Required Date: 10/9/2009 Req'd Qty: 8.00

Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

QC

Memo

0.00

Quality Control

PART SCRAPED
(see NCR)

09.10.29

140

Chemical Conversion Coat per QSI005 4.1

0.00

HandFinish

Memo

0.00

Hand Finishing

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Powdercoat

Memo

0.00

Powder Coating

START TIME: ☐ OVEN TEMPERATURE:
☐ FINISH TIME:



Work Order ID 52328

Tuesday, September 22, 2009 3:12:10 PM



Page 3

Item ID: D2573

Accept



Setup Start



Revision ID: E

Stop



Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009 Start Qty: 8.00



Cust Item ID:

Required Date: 10/9/2009 Req'd Qty: 8.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

170

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

u 9.10.30

Picklist Print

Page 1

Tuesday, September 22, 2009 3:12:09 PM

Work Order ID: 52328



Parent Item: D2573RevE



Parent Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009

Required Date: 10/9/2009

Comments:

Start Qty: 8.00

Required Qty: 8.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6101-007RevB		Manufactured	No			100	Each	0.0000	8.0000			
Saddle Billet												

Batch #: B46412 8 ML 09/10/07

Batch #: B46412 1 AB 09/10/07 (Scrap)

DART AEROSPACE LTD	Work Order: 32328
Description: Saddle, Aft Outboard	Part Number: D2573
Inspection Dwg: D2573 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443		.440	.440	.440			
B	1.745	1.755		1.748	1.750	1.750			
C	3.495	3.505		3.500	3.500	3.500			
D	1.745	1.755		1.750	1.750	1.750			
E	7.990	8.010		8.000	8.000	8.000			
F	0.490	0.510		.504	.504	.500			
G	0.257	0.262		.259	.259	.259	.258		
H	0.375	0.380		.378	.377	.377	.377		
I	0.490	0.510		.493	.496	.500			
J	1.174	1.184		1.178	1.178	1.178	1.177		
K	0.558	0.578		.559	.556	.558			
L	1.174	1.184		1.178	1.178	1.177	1.177		
M	1.365	1.375		1.367	1.367	1.367	1.367		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.123	4.123	4.123	4.123		
P	0.115	0.135		.125	.124	.122	.124		
Q	0.115	0.135		.135	.135	.135			
R	0.240	0.260		.251	.252	.251	.252		
S	0.115	0.135		.128	.130	.121			
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.228	3.228	3.224	3.234		
V	0.230	0.250		.238	.240	.238			
W	0.115	0.135		.130	.134	.135			
X	0.308	0.313		.310	.310	.311			
Y	0.760	0.765		.760	.760	.760			
Z	0.352	0.372		.364	.364	.364			
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.632	.632	.630			
AC	0.053	0.073		.063	.063	.063			
AD	0.240	0.260		.250	.250	.250	.250		
AE	1.500	1.520		1.512	1.511	1.512			
AF	0.115	0.135		.125	.130	.135			
AG	0.240	0.280		.271	.271	.277	.275		
AH	0.240	0.260		.247	.250	.249			
AI	2.000	2.020		2.002	2.002	2.002			
AJ	0.023	0.043		.033	.033	.077			

Accept/Reject

Measured by: <i>AP</i>	Audited by:
Date: 09/00/08	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.25	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	<i>JA</i>

DART AEROSPACE LTD	Work Order: 32328
Description: Saddle, Aft Outboard	Part Number: D2573
Inspection Dwg: D2573 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				51	62	73	84		
A	0.438	0.443		440	439	440	440		
B	1.745	1.755		1.750	1.750	1.749	1.750		
C	3.495	3.505		3.500	3.500	3.499	3.500		
D	1.745	1.755		1.750	1.750	1.749	1.750		
E	7.990	8.010		8.000	8.001	8.001	8.001		
F	0.490	0.510		505	506	506	508		
G	0.257	0.262		258	258	258	258		
H	0.375	0.380		377	377	377	377		
I	0.490	0.510		502	494	496	495		
J	1.174	1.184		1.177	1.177	1.177	1.177		
K	0.558	0.578		568	555	558	560		
L	1.174	1.184		1.177	1.177	1.177	1.177		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		126	126	127	127		
Q	0.115	0.135		135	135	135	135		
R	0.240	0.260		252	252	253	253		
S	0.115	0.135		117	120	125	125		
T	0.178	0.198		188	188	188	188		
U	3.210	3.250		3.230	3.270	3.230	3.270		
V	0.230	0.250		238	234	243	244		
W	0.115	0.135		115	109	125	134		
X	0.308	0.313		308	310				
Y	0.760	0.765		760	760				
Z	0.352	0.372		362	372	363	368		
AA	0.470	0.530		500	500	500	500		
AB	0.615	0.635		630	635	635	635		
AC	0.053	0.073		63	63	63	63		
AD	0.240	0.260		250	250	250	250		
AE	1.500	1.520		1.517	1.530	1.500	1.508		
AF	0.115	0.135		125	125	125	118		
AG	0.240	0.280		270	270	270	270		
AH	0.240	0.260		250	243	253	253		
AI	2.000	2.020		2.002	2.022	2.000	2.000		
AJ	0.023	0.043		23	23		2024		

Accept/Reject

Measured by: SP	Audited by:
Date: 09/10/09	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

DART AEROSPACE LTD	Work Order: 52328
Description: Saddle, Aft Outboard	Part Number: D2573
Inspection Dwg: D2573 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				9	10	11	4		
A	0.438	0.443		.440	.439	.439			
B	1.745	1.755		1.748	1.749	1.749			
C	3.495	3.505		3.499	3.499	3.499			
D	1.745	1.755		1.749	1.749	1.749			
E	7.990	8.010		8.004	8.003	8.003			
F	0.490	0.510		.502	.503	.505			
G	0.257	0.262		.258	.259	.259			
H	0.375	0.380		.377	.377	.377			
I	0.490	0.510		.502	.500	.500			
J	1.174	1.184		1.177	1.178	1.178			
K	0.558	0.578		.569	.569	.569			
L	1.174	1.184		1.177	1.178	1.178			
M	1.365	1.375		1.370	1.369	1.368			
N	2.495	2.505		2.500	2.500	2.499			
O	4.119	4.129		4.129	4.123	4.123			
P	0.115	0.135		.122	.125	.123			
Q	0.115	0.135		.135	.135	.135			
R	0.240	0.260		.252	.257	.257			
S	0.115	0.135		.128	.127	.124			
T	0.178	0.198		.188	.188	.188			
U	3.210	3.250		3.230	3.230	3.230			
V	0.230	0.250		.242	.240	.240			
W	0.115	0.135		.132	.129	.130			
X	0.308	0.313			.312	.312			
Y	0.760	0.765			.760	.760			
Z	0.352	0.372		.368	.368	.367			
AA	0.470	0.530		.500	.500	.500			
AB	0.615	0.635		.635	.635	.633			
AC	0.053	0.073		.063	.063	.063			
AD	0.240	0.260		.250	.248	.249			
AE	1.500	1.520		1.509	1.511	1.511			
AF	0.115	0.135		.122	.126	.126			
AG	0.240	0.280		.270	.273	.278			
AH	0.240	0.260		.257	.249	.257			
AI	2.000	2.020		2.000	2.002	2.000			
AJ	0.023	0.043			.033	.033			
Accept/Reject									

Measured by: <i>RF</i>
Date: <i>09/10/09</i> / <i>09/10/11</i>

Audited by:
Date:

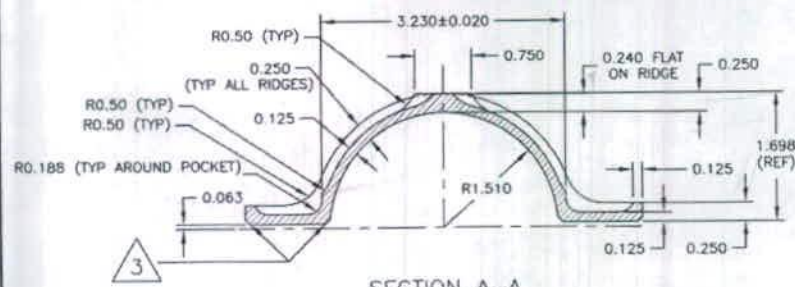
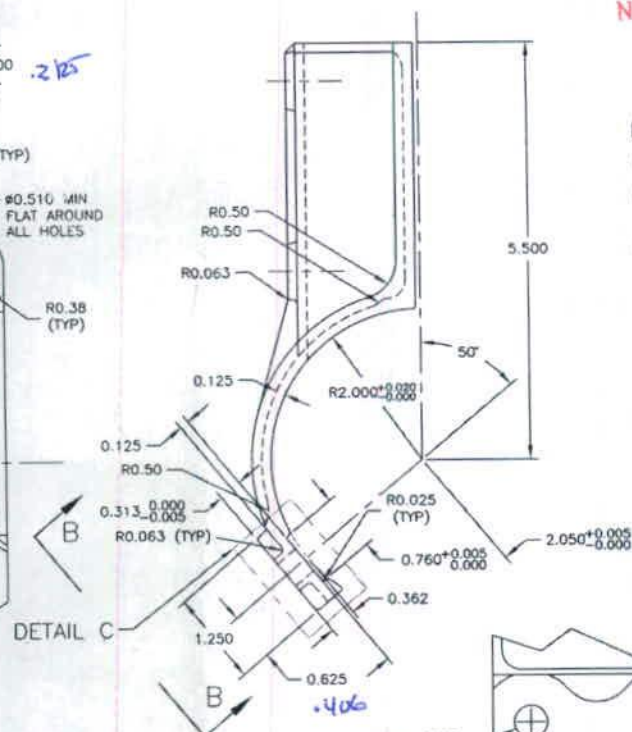
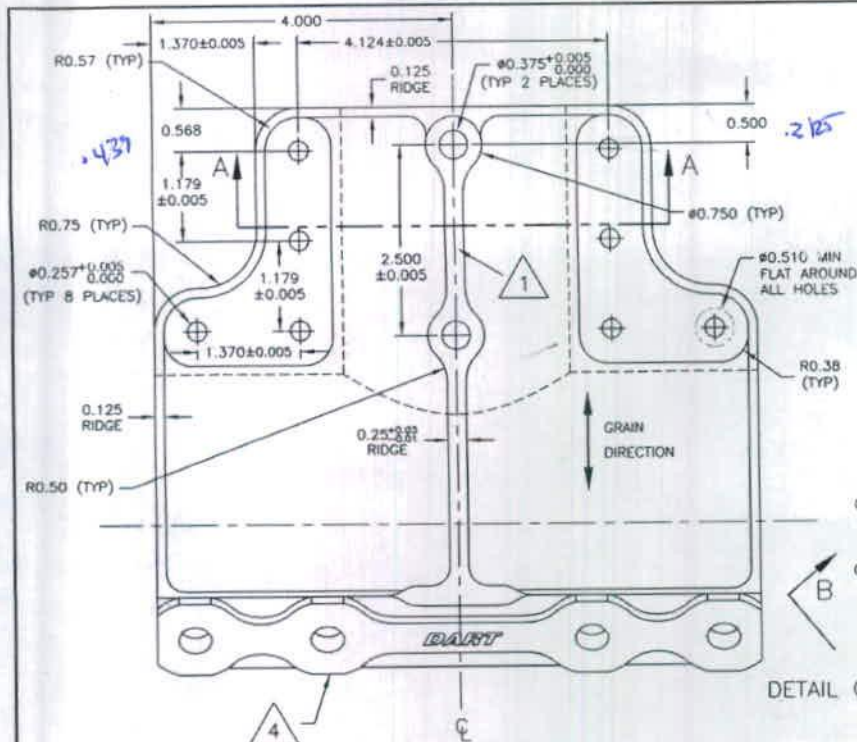
Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	<i>[Signature]</i>

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER
NO. 52328

RELEASED

05-12-86



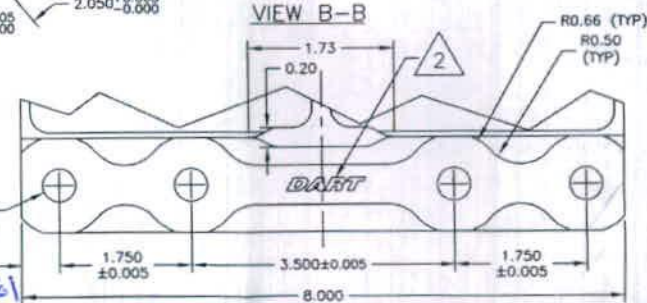
DETAIL C
SCALE 4:3

NOTES

MATERIAL: 7075-T7351 (Q0-A-250/12)
(REF DART SPEC. D6102-001)
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER
DART QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- 1 ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010
- 2 ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD 0.125
- 3 CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES)
- 4 CHAMFER 0.063" x 45° ALL AROUND
- 5 CHAMFER 0.033" x 45° (SEE DETAIL C) E

VIEW B-B



E	05.07.13	ADD CHAMFER ON RIDGE NOTE 5
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCORP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE

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DART AEROSPACE LTD.

DESIGN	DS	DRAWN BY	PH	DART	DART AEROSPACE LTD. HAMPSHIRE, ENGLAND, CANADA
CHECKED	#	APPROVED	#	D2573	REV. E
DATE	05.07.13	TITLE	OUTER AFT SADDLE	SCALE	2:3

SHEET 1 OF 1

